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| 10/538,492 | 06/09/2005 | Koji Matsumoto | 0020-5382PUS1 | 7092 |
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| EXAMINER SULTANA, NAHIDA | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/538,492

Applicant(s)

MATSUMOTO ET AL.

Examiner

NAHIDA SULTANA

Art Unit

1791

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/200)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 09/02/2009

DETAILED ACTION

1. This non-final action is in response to the amendment received on 09/02/2009, for the office action sent on 04/02/2009.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isozaki (US Patent 6, 337, 369 B1) in view of Albert et al. (US Patent 3, 254, 561) and in further view of Dempo (US patent 5, 512, 178).

For claims 1, 2, 3, Isozaki teach:

A method for producing a polarizing film comprising: the step of supplying polyvinyl film in/on which iodine is absorbed and oriented in an aqueous solution containing boric acid (col. 6. lines 38-50 and col. 4. lines 59-67).

However, Isozaki et al. is silent to dipping and treating said polyvinyl film in aqueous solution wherein of said aqueous solution at a wavelength of 450 nm is maintained in a range of 0.13 or less; wherein said aqueous solution containing boric acid is recycled while maintaining the absorbance of the aqueous solution at a wavelength of 450 nm in a range of 0.13 or less; wherein the absorbance of said

aqueous solution containing boric acid at a wavelength of 450 nm is maintained in a range of 0.13 or less by continuously or intermittently treating said aqueous solution with activated carbon.

In the same field of endeavor, process for polarizing ultraviolet light utilizing oriented, iodide stained film, Albert et al. teach having a polyvinyl alcohol film stretched and stained in processing in solution containing iodine, water and boric acid (col. 3, lines 1-10), and later uses iodide solubilizing agent in order to reduce iodine in the solution (col. 4, lines 5-15), and utilizes ultraviolet light through the film in the solution (col. 4, lines 5-10), thus resulting specific transmittance and different wavelengths (col. 3, lines 15-23).

It would have been obvious to one having the ordinary skill in the art at the time of the invention to modify the method of producing polarizing film as taught in Isozaki with adjusting the level of iodine present in the solution using the solubilizing reagent for iodine (col. 2, lines 44-46, col. 6, lines 10-15), as taught in Albert et al, for the benefit of having specific transmittance and wavelength in the ultraviolet region (col. 2, lines 70-72), and resulting polarizer having substantially improved efficiency in the ultraviolet region (col. 4, lines 10-12), since it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Furthermore, one ordinary skill in the art would also know that there are other ways of removing iodine from the boric acid solution, such as chemical or physical or electrochemical technique.

In the same field of endeavor, treating aqueous solution to remove any oxidizing agent, Dempo teaches that an activated carbon filter can be used to remove oxidizing substances from an aqueous solution (col. 3. lines 34-38). In this case the oxidizing component is the Iodine of Isozaki.

Because Isozaki et al. uses technique such as dipping stretched film containing iodide as shown above, it is inherent that iodide will also dissolve in the solution and produce color. Therefore, it would have been obvious to one ordinary skill in the art at the time of the applicant's invention to modify method of producing polarizing film as taught in Isozaki, with removing iodine which results in specific wavelength, as taught in Albert, and further using a carbon activated filter taught, in Dempo for the benefit of removing iodine . This combination above produces a solution containing wavelength and absorbance in the claimed ranges, resulting in specific contrast in the film.

As for claim 5, Isozaki further teach: wherein a temperature of said aqueous solution containing boric acid is from 55°C to 85°C (col. 6. lines 40-45), and a dipping time is from 90 seconds to 1,200 seconds (4 minutes as shown in col. 6. lines 45-46).

As for claim 6, Isozaki further teach: wherein said polyvinyl alcohol has a polymerization degree of 1,500 to 5,000 ("A film of PVA degree of polymerization 4000" col. 6. lines 35-40).

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Isozaki (US Patent 6, 337, 369 B1) in view of Albert et al. (US Patent 3, 254, 561) in view of

Dempo (US patent 5, 512, 178) and in further view of Tsuchimoto et al. (US publication 2003/0197939 A1) .

Regarding claim 4, Isozaki 369' teach: having potassium iodide (about 20 g/L, col. 6. lines 40-42), boric acid (40 g/L, see col. 6. lines 40-41) in an aqueous solution. Furthermore, Isozaki et al. also mentions having water in the aqueous solution (col. 4. lines 55-60), thus these ratios are of boric acid and potassium iodide are similar to the applicant's claimed invention. However the above references failed to teach the concentration of water.

In the same field of endeavor, polarizing film and process for producing it, polarizing plate and optical element, Tsuchimoto et al. teach similar range of concentration aqueous solution containing boron compound (at 0.1 to 15 weight percent, paragraph [0011]) having water (100% weight parts, paragraph [0011]) , and potassium iodide (0.5 to 50 weight parts of water, paragraph [0011])

It would have been obvious to one ordinary skill in the art at the time of applicant's invention to modify the composition of Isozaki 369' with specific water, potassium iodide, and boron compound, as taught in Tsuchimoto et al., for the benefit of having a desired concentration where polarizing film exhibits a high transmittance (see abstract).

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Isozaki (US Patent 6, 337, 369 B1) in view of Albert et al. (US Patent 3, 254, 561), in view of

Dempo (US patent 5, 512, 178) and in further view of Isozaki et al. (US Publication 2004/0089960 A1).

As for claim 7, Isozaki 369' further teach that there is no limitation on number of each treatment (col. 3. lines 35-36), and having multiple stretching steps (col. 4. lines 25-30). However, the steps taught in Isozaki are one way of forming the film, and there are other ways of forming it., and there are other ways stretching and dipping can be done.

However, the specific dipping and stretching steps as claimed is not shown in Isozaki, However, one ordinary skill in the art would know to modify them.

In the same field of endeavor, process for producing polarizing film, Isozaki 960' teach: wherein said polyvinyl alcohol film in/on which iodine is adsorbed (paragraph [0056]), and oriented is a film produced by uniaxially stretching an unstretched polyvinyl alcohol film in water ("dipper in water" paragraph [0056]) and then dipping it in a solution containing iodine and potassium iodide ("iodide and potassium iodide" paragraph [0056]), a film produced by dipping an unstretched polyvinyl alcohol film in a solution containing iodine and potassium iodide ("iodide and potassium iodide" paragraph [0056]) and then uniaxially stretching it a film produced by uniaxially stretching an unstretched polyvinyl alcohol film in a solution containing iodine and potassium iodide (paragraph [0056]), a film produced by uniaxially stretching an unstretched polyvinyl alcohol film in a plurality of dipping steps (paragraph [0056]), or a film produced by uniaxially stretching an unstretched polyvinyl alcohol film in a dry state

and then dipping it in a solution containing iodine and potassium iodide (paragraph [0056]).

It would have been obvious to one ordinary skill in the art at the time of the applicant's invention to modify method of producing polarizing film as taught in Isozaki 369' with having multiple varying stretching and dipping step, taught in Isozaki 960' for the benefit of absorbing material and having extremely good polarizing properties (paragraph [0057]).

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-7 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6, and 8-10 of copending Application No. 10/538079. Although the conflicting claims are not identical, they are

not patentably distinct from each other because the claim contains similar subject matter described differently.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

For claims 1-7, Application 079' teaches:

a method for producing a polarizing film comprising the step of supplying a polyvinyl alcohol film in/on which iodine is adsorbed and oriented in an aqueous solution containing boric acid and dipping and treating said polyvinyl alcohol film with said aqueous solution, (cl 1);

wherein polyvinyl alcohol film is dipped in said aqueous solution containing boric acid while said aqueous solution is treated with activated carbon continuously or intermittently (cl. 6);

wherein a weight ratio of water: boric acid: potassium iodide in said aqueous solution containing boric acid is usually 100:(2-15):(2-20) (cl. 1);

wherein said polyvinyl alcohol has a polymerization degree of 1,500 to 5,000 (cl. 9);

wherein a temperature of said aqueous solution containing boric acid is from 55°C to 85°C, and a dipping time is from 90 seconds to 1,200 seconds (cl. 8);

wherein said polyvinyl alcohol film in/on which iodine is adsorbed and oriented is a film produced by uniaxially stretching an unstretched polyvinyl alcohol film in water and then dipping it in a solution containing iodine and potassium iodide, a film produced

by dipping an unstretched polyvinyl alcohol film in a solution containing iodine and potassium iodide and then uniaxially stretching it, a film produced by uniaxially stretching an unstretched polyvinyl alcohol film in a solution containing iodine and potassium iodide, a film produced by uniaxially stretching an unstretched polyvinyl alcohol film in a plurality of dipping steps, or a film produced by uniaxially stretching an unstretched polyvinyl alcohol film in a dry state and then dipping it in a solution containing iodine and potassium iodide (cl. 10).

Furthermore, since the boric acid is treated with activated carbon continuously and intermittently as shown above, it is inherent the wavelength is maintained at 450 nm, and 0.13 absorbance.

Response to Arguments

Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAHIDA SULTANA whose telephone number is (571)270-1925. The examiner can normally be reached on Mon- Fri 7:30 Am - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Del Sole can be reached on 517-272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NS

/Maria Veronica D Ewald/
Primary Examiner, Art Unit 1791